

LS990031
patent application

REMARKS

In the February 26, 2003 Office Action, claims 36-63 are acknowledged as pending in the Application, wherein the Examiner has variously rejected all pending claims. After entry of the instant Response, claims 36-63 and 84-103 are pending. Applicants believe all pending claims to be allowable over the prior art of record with entry of the instant Response.

LS990031
patent application

Election / Restrictions

In the pending Action, the Examiner has constructively elected Group I corresponding to claims **36-63** and has withdrawn claims **64-83** from consideration in accordance with 37 CFR §1.142(b) and MPEP §821.03.

Applicants have added new method claims **84-103** and request that the Examiner consider the new method claims since one-way distinctiveness is no longer present between claim **36** as amended, previously pending claims **37-63** and newly added claims **84-103**. Specifically, the method-based claims cannot be said to be 'distinct' from the device-based claims to the extent that: (1) the process as claimed cannot be used to make other and materially different product; and (2) the product as claimed cannot be made by another and materially different process. Device claim **36**, and all device claims depending therefrom, cannot be made by any other process other than that of the method of claim **84**. Method claim **84**, and all method claims depending therefrom, cannot be used to produce any other product than that of the device of claim **36**. Accordingly, Applicants respectfully request that the Examiner consider the newly added method claims in conjunction with the previously pending device claims.

LS990031
patent application

Claim Rejections – 35 U.S.C. §103(a)

Claim 36 stands rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 5,849,208 to Hayes, *et al.* in view of U.S. Patent No. 6,465,190 B1 to Hirota *et al.*. The Examiner suggests that Hayes teaches a device comprising: a plurality of well structures for the parallel processing of a plurality of molecular reactions; a cooling element; and a temperature monitoring element associated with each well structure. The Examiner admits that Hayes does not teach a device fabricated as a substantially monolithic structure using green sheets; however, the Examiner makes reference to Hirota as purportedly providing the missing elements not found in the Hayes disclosure. The Examiner then proposes that it would have been obvious to incorporate the method of Hirota in the fabrication of the device of Hayes, "since the Courts have held that the construction of a one-piece, integrated construction for a structure formerly disclosed in the prior art is within the ambit of one of ordinary skill in the art". Applicants respectfully traverse.

In order to establish a *prima facie* case of obviousness under §103, three basic criteria must be met: (1) there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings; (2) there must be a reasonable expectation of success; and (3) the prior art reference (or references when combined) must teach or suggest **all of the claim limitations**. See MPEP §2143; *emphasis added*.

With respect to the first requirement under MPEP §2143, the pending Action fails to provide a reasoned basis for the suggestion or motivation to combine the disclosure of Hayes with that of Hirota or that of any other knowledge or teaching of record. For example, the disclosures of Hayes and Hirota do not suggest, either alone or in combination, "a substantially monolithic device structure wherein [the] plurality of well structures are define within material comprising a plurality of green sheet layer [...] and said substantially monolithic structure further comprises thermally insulating material separating [the] well structures". See, for example, Applicant's claim 36. Indeed, the synthetic argument made for the combination is malformed to the extent

LS990031
patent application

that the Examiner has recited unitary structure disclosed in a single reference followed with recitation of a subjective 'common knowledge' argument (citing *In re Larson*) in support of the unsubstantiated assertion that it would have been obvious to make the proposed structural combination to arrive at not only the structure of Applicants' invention, but the function as well. Respectfully, Applicants are affirmatively unaware of any caselaw which instructs or otherwise suggests to the Examining corps that the holding of a Court decision may be used to provide the required motivation under MPEP §2142.

Applicants note that the Examiner possesses a doctoral degree and accordingly, as someone *superiorly* skilled in the art, may have unwittingly applied a subjectively high threshold for determining whether Applicants' invention may be considered obvious. To the extent that the combination of Hayes and Hirota with the assertion of a 'common knowledge' argument has not been reasonably motivated or suggested either in the reference itself or by specifically identified knowledge generally available to *ordinarily* skilled artisans, under the second requirement of MPEP §2142, there can accordingly be no reasonable basis or practical expectation for success. Under the circumstances, such an expectation may be only regarded as unreasonable at best. Moreover, even if the disclosure of Hayes were combined with that Hirota, such a combination would not lead a person skilled in the art to develop Applicants' invention. Rather, the substrate 50 of Hirota is for that of a non-analogous micropipette and not that of an assay array. See Hirota at col. 12, lines 8-18; figures 4c and 5. Such a combination would, at best, provide a micropipette for assay use – not Applicants' invention. Moreover, nowhere in the Hayes or Hirota references is there any appreciation that thermally conducting or insulating materials separating the well structures may be exploited to provide greater discrete array element reaction control, much less the specifically enabled techniques disclosed in accordance with Applicants' instant invention. Accordingly, the combination of Hayes and Hirota purportedly motivated by common knowledge cannot be said to disclose each and every element of Applicants' claims under the third requirement of MPEP §2431.

LS990031
patent application

Notwithstanding the preceding, Applicants would also point out for the Examiner's consideration that "[w]ith respect to core factual findings in a determination of patentability, [the Office] cannot simply reach conclusions based on its own understanding or experience – or on its assessment of what would be basic knowledge or common sense [...] rather, the [Office] must point to some **concrete evidence in the record in support of [the] findings.**" See, *In re Zurko*, 258 F.3d 1379, 59 USPQ2d (BNA) 1693 (2001); *emphasis added*. Moreover, "deficiencies of the cited references [to support a determination of obviousness] cannot be remedied by the [Office's] general conclusions about what is 'basic knowledge' or 'common sense' to one of ordinary skill in the art." *Ibid*; *emphasis added*. Applicants therefore respectfully request that the Examiner withdraw the §103 rejection of claim 36 as amended.

Inasmuch as dependent claims 37-63 depend to their detriment on all of the limitations of independent claim 36 as amended, Applicants respectfully request that the Examiner also remove the §103 rejection of dependent claims 37-63.

LS990031
patent application

CONCLUSION

The cited references have been reviewed and are not believed to affect the patentability of claims **36-63** as amended and newly added claims **84-103**. Claims **36-63** and **84-103** are pending in the Application. Consideration of all pending claims is earnestly requested.

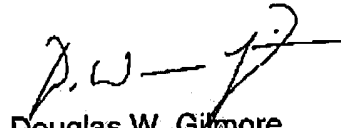
No amendment made herein was related to the statutory requirements of patentability unless expressly stated; rather any amendment not so identified may be considered as directed *inter alia* to clarification of the structure and/or function of the invention and Applicants' best mode for practicing the same. Additionally, no amendment made herein was presented for the purpose of narrowing the scope of any claim, unless Applicant has argued that such amendment was made to distinguish over a particular reference or combination of references. Furthermore, no election to pursue a particular line of argument was made herein at the expense of precluding or otherwise impeding Applicants from raising alternative lines of argument later during prosecution. Applicants' failure to affirmatively raise specific arguments is not intended to be construed as an admission to any particular point raised by the Examiner.

LS990031
patent application

Should the Examiner have any questions regarding this Response or feel that a telephone call to the undersigned would be helpful to advance prosecution, the Examiner is invited to call the undersigned at the number given below.

Respectfully submitted,

CYNTHIA BRISCOE
HUINAN YUBARBARA
FOLEY PIOTR GRODZINSKI
JEREMY BURDON
TONY CHAN
RONG-FONG HUANG



Douglas W. Gilmore
attorney for applicants
Reg. No. 48,690

Dated: May 23, 2003

Motorola, Inc.
Corporate Law Department
Mail Drop 56-238
3102 North 56th Street
Phoenix, AZ 85018-6697

tel 602.952.3482 / fax 602.952.4376
doug.gilmore@motorola.com